

ABSTRACT

For the purpose to promote proliferation of a plant cell, a novel gene is provided by this invention. This invention provides a precursor polypeptide of phytosulfokine that enhances proliferation of a plant cell derived from *Arabidopsis Thaliana*, named *AtPSK2* polypeptide. This invention further provides *AtPSK2* gene that encodes the *AtPSK2* polypeptide. Moreover, this invention provides another precursor polypeptide of phytosulfokine that enhances proliferation of a plant cell derived from *Arabidopsis Thaliana*, named *AtPSKL* polypeptide. This invention further provides *AtPSKL* gene that encodes the *AtPSKL* polypeptide. Proliferation of a plant cell can be achieved by incorporation of the gene according to this invention.

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